PROC. ENTOMOL. SOC. WASH.
85(1), 1983, pp. 144–151

A NEW SPECIES OF *OMMATIUS* (DIPTERA: ASILIDAE) FROM SAN SALVADOR, THE BAHAMAS

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Abstract.—A new asilid, *Ommatius* ***hanebrinki,*** from the island of San Salvador in the Bahamas is described and illustrated. This taxon is the first record of the genus on the island and the third species reported from the Bahamas.

The genus *Ommatius* is a large and widely distributed genus particularly abundant in Africa and the South Pacific (Hull, 1962). Thus far none have been reported in Europe, in North America north of 45° N, or south of Brazil in South America. The islands of the Caribbean have been little explored and have few representatives, with most being reported from Jamaica (Farr, 1965) and Cuba (Bromley, 1929). Presently only *O. abana* Curran (Curran, 1953) has been reported from the Bahamas. In addition, we located a female *O. marginellus* (Fabricius) (14–16 Febr., 1932, Utowana Exp.) from Rum Cay, Bahamas, in the collection of the Museum of Comparative Zoology, Harvard University.

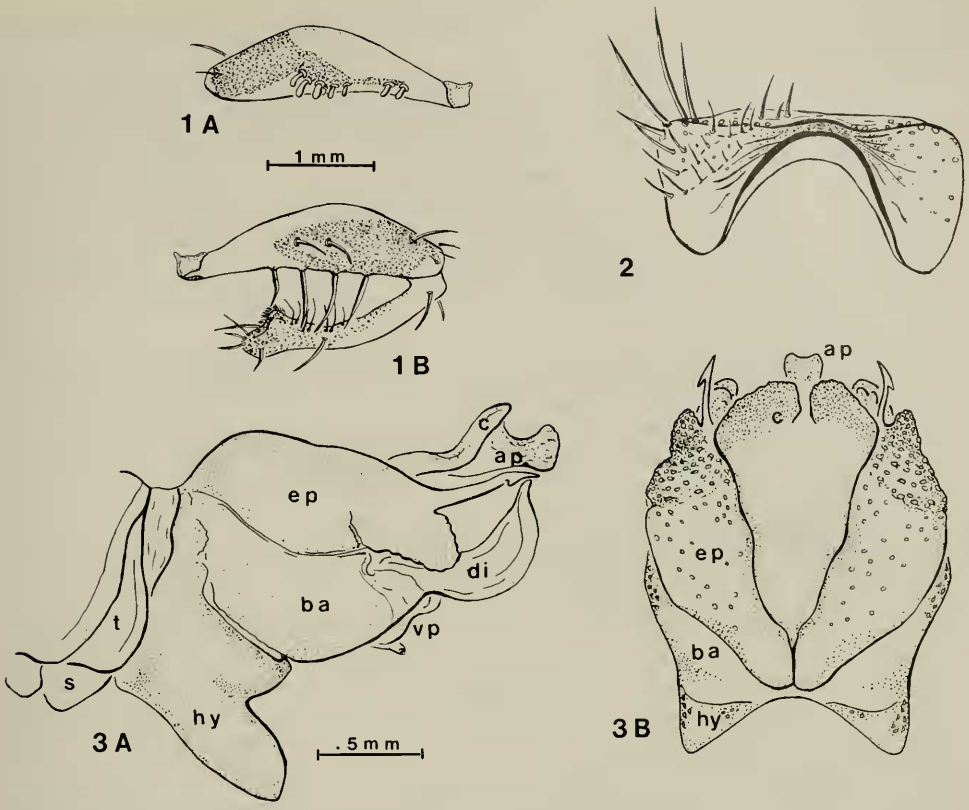
Since 1978 we have been collecting and observing asilids on the island of San Salvador in the Bahamas. Our studies have revealed that at least two undescribed species exist on the island. They will probably be found on other islands as they are explored. This paper reports on a new species of *Ommatius* found on San Salvador.

Ommatius hanebrinki Scarbrough and Rutkauskas, New Species

Figs. 1–9

Holotype male (Figs. 1–6).—Length, 12.5 mm. Head dark brown. Face dense yellow tomentose, grading to white below mystax; in lateral view, tomentum yellowish brown at middle and above antennae. Front yellow tomentose, with 4 weak, yellow frontal hairs. Vertex yellowish tomentose grading to whitish yellow posteriorly on occiput. Ocellar tubercle shiny dark brown with scattered yellow tomentum above; 4 dark brown ocellar bristles, posterior 2 very short. Mystax of rather sparse slender bristles, mixed long and short, most abundant on lower ½, bristles whitish, with longer ones (6) pale yellow. Palpi black, 6× longer than wide; hairs white. Proboscis dark brown; whitish to pale brown hairs ventrally from base to middle, pale yellow and short at apex. Beard and occipital hairs long, whitish, somewhat plumose. Subproclinate occipital bristles pale yellow to light brown, with 4 black bristles above.

Antenna dark brown, segments of equal length, with yellow and brown tomentum; yellow except at apex of 2nd and all of 3rd segments where brown is combined



Figs. 1–3. *Ommatius hanebrinki,* male. 1, Segments of left hindleg showing major chaetotaxy and apical bands. 1A, Posterior view of femur. 1B, Anterior view of femur and tibia. 2, Tergum 8. 3A, Hypopygia, lateral view. 3B, Hypopygia, dorsal view. Abbreviations: ap = anal process; ba = basistylus; c = cercus; di = dististylus; ep = epandrium; hy = hypandrium; s = sternum; t = tergum; vp = ventral process of basistylus.

with yellow, producing a golden brown contrasting color at some angles and yellow at others. Anterior (inner) surface of segment 2 with only scattered tomentum. Antennal bristles on all segments dark brownish black except for a few pale yellow or whitish ones below; style length about 2½× the three segments combined, rays of styles 12–13.

Thorax dark brown. Pronotum tomentose greyish white, yellowish medially at base; hairs white to pale yellow. Mesonotum with 3 broad brown vittae, central one divided longitudinally nearly its full length by dark ochreous golden pollen, lateral vittae divided by oblique sutures. Mesonotum with yellowish white to golden ochreous tomentum except on exposed elevated sections, shiny dark brown. Thoracic bristles black: presutural 2 (1st ½ length of 2nd), supra-alar 1, postalar 1 (an additional weak one on the left side); dorsocentrals consisting of 10 short pairs, 2 long, strong, black hairs and 2 thin white ones behind. Several fine whitish hairs below supra-alar bristles, 3 weak black bristles above presuturals. Anatergal slopes and pleurae greyish white tomentose, except yellowish brown anterior to wing bases; hairs sparse, weak, white. Pteropleural bristles absent; laterotergal and

anatergal bristles white. Several thin white hairs on scutellar disc, none projecting above rest as conspicuous pairs.

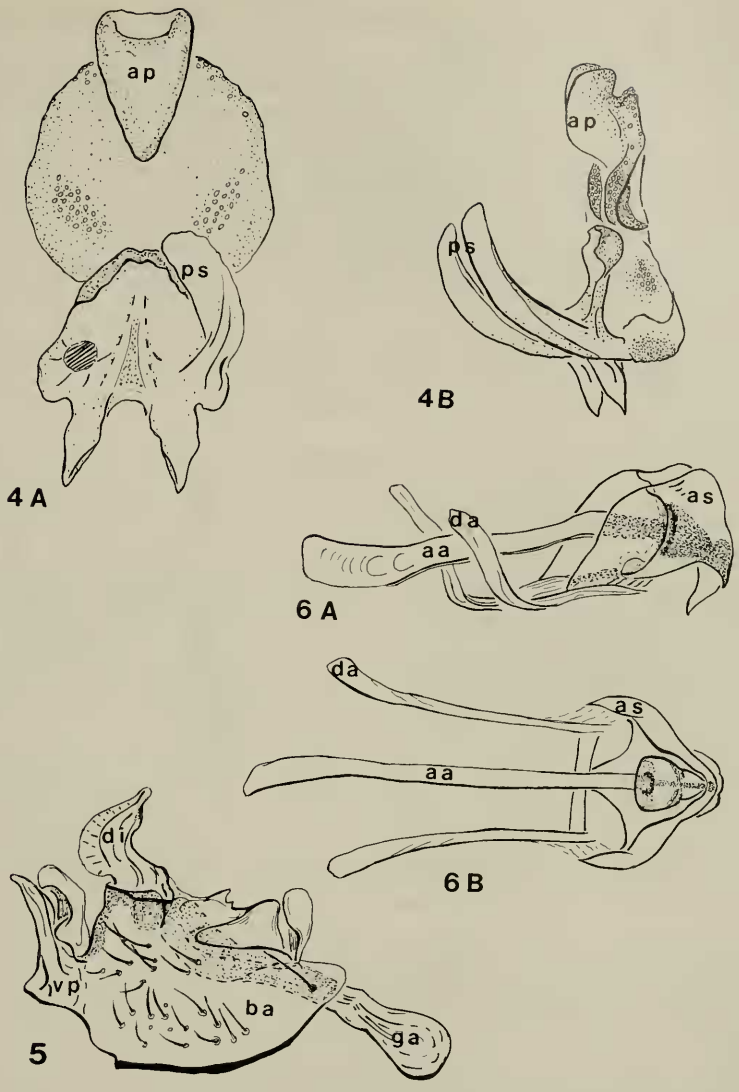
Coxae black with greyish-white tomentum, white hairs and bristles. Legs brownish yellow, fore- and midtibiae slightly paler, apical black bands on all leg segments and a basal band on forefemur; bands narrow on fore- and midtibiae, extensive on hindtibia, covering apical 3/4; bands of femora as follows: apical 1/3 and basal 1/2 of anterior surface of forefemur, apical 2/3 of anterior surface of mid- and hindfemora, bands on posterior surfaces narrow and obsolete below, posterior band of hindfemur extends basally in narrow strip about 3/4 length of segment. Fore- and midlegs of normal shape, hindfemur swollen, evenly contoured, hindtibia enlarged apically.

Femora clothed with pale yellow to short white pile, longer below and on dorsal and posterior surfaces of hindfemur, mixed with black on dorsal surface, primarily black on black areas; several prominent spines, singly at apex and on anterior surface and in rows ventrally, pale yellow to white except for 1 black bristle near base of anterior surface of midfemur and 1 or 2 weak apical bristles on all femora and 1 black preapical bristle on midfemur. Forefemur with 1 row of ventral bristles, mid- and hindfemora with 2 rows, often intermixed with long pale pile, posteroventral row of hindfemur slightly curved distally with 6 bristles and 2 basally, bristles flat, short and tips rounded. Vestiture of tibiae pale yellow to white except as follows: scattered, black, appressed setulae on all tibiae, absent ventrally except near apex, 1 short dorsobasal bristle on fore- and midtibiae, several strong black bristles on apical bands of fore- and midtibiae, 1 or 2 weak black bristles on apical band of hindtibia, 1 pale brown dorsal bristle near apical band of midtibia. Sparse long pale yellow pile on all tibiae, most prominent on apical 1/2 of hindtibia, posterior surface of hindtibia with a longitudinal bare line extending nearly full length of segment, ventral row of weak bristles, bristles primarily pale yellow on fore- and hindtibiae, black on midtibia. Foretibia with anteroventral pad of thick orange hairs, extending from apex to about 2/3 length of segment.

Tarsi dark brown to black, basal segments pale except for narrow black apical band, foretarsus noticably paler than others; tarsi with pad of short orange hairs and black bristles, basal tarsomeres with relatively long pale yellow bristles, 5 on first 3 tarsomeres of foretarsus, 3 or 4 on first 2 or 3 tarsomeres of midtarsus, 2 on tarsomere 1 of hindtarsus; except for 1 on foretarsus, all pale yellow bristles are on posterior surfaces. Claws black except for basal 1/5, orange yellow.

Wings hyaline, veins light brown at basal 1/5, dark brown elsewhere. Costal setae short, dark brown to black; fringe of posterior wing margin golden brown; costal margin without a bulge. Microtrichiae golden brown, present on apical 1/3 of wing and along wing margin to middle of CuA and inner 2/3 of subcosta, densest along anterior margin, less dense along posterior margin, absent medially and basally. Brownish tomentum on veins basally and medially, and on basal 1/3 of subcostal cell. Middle of marginal cell with several brownish vertical streaks. Halter yellow brown, bases and stalks pale.

Abdomen dark brown to black, posterior border of terga light brown. Dorsally, terga mostly brown tomentose with yellow, sides cinereous yellow except the following: tergum 1 and anterior 1/3 of 2, more yellow and less brown above and sides more white than yellow; terga 7 and 8 combined shorter than 6, both shiny



Figs. 4–6. *Ommatius hanebrinki,* male hypopygia. 4A, Sternum 10 and anal process, ventral view. 4B, Sternum 10 and anal process, ventral view. 5, Left gonopod. 6A, Aedeagus, lateral view. 6B, Aedeagus, ventral view. Abbreviations: aa = aedeagal apodeme; ap = anal process; as = aedeagal sheath; ba = basistylus; da = dorsal apodeme; di = dististylus; ga = gonopod apodeme; ps = process of sternum 10; vp = ventral process of basistylus.

black with some yellow tomentum at the midline and on lateral margins; tergum 8 excised anteriorly at middle. Extreme margins of terga 1–5 with prominent narrow line of yellowish-brown tomentum. Bristles of terga usually pale yellow, short, slightly longer at corners; a few black bristles on terga 7 and 8; hairs on terga 1 and 2 whitish. Venter dark brown except for wide bands on posterior margins of sterna 2–4, bands on 5–6 narrow; tomentum cinereous yellow, except sternum 1 and anterior margin of 2 more grey white. Pale white hairs on sterna

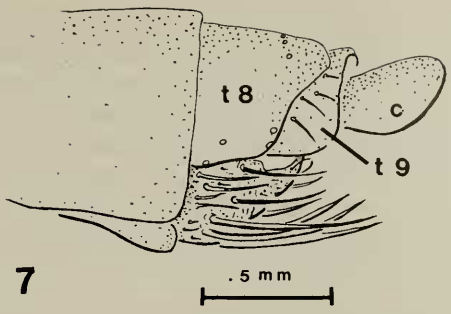
1–4; short, sparse pale yellow bristles on 5–6, more abundant and stronger on 7–8, especially on posterior margins.

Hypopygia longer than terga 6–8 combined, shiny black except as follows: venter and associated appendages, apical ⅓ to ½ of the basistylus and apical ⅓ of the epandrium, brown to orange red. Hypopygial bristles mostly black, sometimes pale yellow or orange red interspersed. Epandrium about 2½× longer than wide, fused basally, apically an elongated harpoon-like structure and a rounded lobe below, bristles scattered near base, dense elsewhere, bristles on apical ⅓ thicker and longer, black to pale yellow with orange red on ventral lobe and margin, black elsewhere. Cerci bipartite, sclerotized brown to reddish brown, joined by membrane. A circular plate below cerci and an elongated anal process which is weakly sclerotized ventrally; hairs pale yellow, abundant along notched margin and 2 posterolateral areas. Hairs at the latter location elongate and bent about midlength at right angles.

Gonopods 2-segmented, basistylus with basally bifurcated ventral process which surrounds the lateral and ventral aspects of the aedeagus; dististylus sickle shaped, orange red. Aedeagus elongate with proximal head recurved, directed dorsally; valve conical, open ventrally, sclerotized except for dorsolateral arms; dorsal apodemes weakly sclerotized, attached laterally to the gonopod apodemes; aedeagal apodeme strongly sclerotized except at distal end. Sternum 10 divided medially along basal margin, with 2 erect leg-like processes which surround the dorsolateral aspects of the aedeagus, and a median groove which receives the aedeagus when not in use. Hypandrium shiny black, consisting of an apical plate and a base which encircles the hypopygium. Bristles short, mostly black, dense on margin of apical plate. Hypandrial plate thick, notched medially, projecting ventrally below basistylus about 45°, with yellow tomentum dorsally and along the midline ventrally.

Allotype female (Figs. 7–9).—Length, 11.3 mm. Similar to male, differing as follows: tomentum of face and front whitish yellow, 4–5 pale brown yellow bristles in upper ½ of mystax; whitish-yellow bristles below only 1st antennal segment, rays of styles 11–12. Three black occipital bristles, dorsal. Mesonotum with 3 strong black dorsocentrals. Pleurae with light yellow tomentum on elevations of anepisternum, katepisternum, and katepimeron. Halter yellowish, darker at base with brown. Wings without brown vertical streaks across middle of marginal cells. Legs darker brownish yellow, more numerous black to pale brown bristles and pile, black dorsobasal bristles longer on mid- and hindtibiae, strong black bristles on apical band of hindtibia and few weak black bristles in ventral row of foretibia. Hindleg slender, without prominent enlargements, posterior band on hindfemur broad, extending almost ½ length of segment, ventral rows of bristles similar. Bristles black except a few pale yellow ones on fore- (2) and midtarsi (4), absent on hindtarsus.

Abdomen with less yellow tomentum anteriorly on segments 1 and 2, golden brown stripes on lateral margins of anterior terga less prominent. Tergum 7 dense tomentose anteriorly and laterally, sparse medially and widened posteriorly; few black bristles along posterior border. Tergum 8 shiny, black medially, brown laterally, longer medially, about ⅔ length of tergum 8; bristles black, yellow pollen limited to median stripe and extreme posterior border. A few strong pale yellow bristles on sterna 4–6; sternum 7 with several (8) short black erect bristles posteromedially, between longer pale yellow ones at corners.



Figs. 7–9. *Ommatius hanebrinki,* female genitalia. 7, Lateral view. 8, Dorsal view. 9, Sternum 8. Abbreviations: c = cercus; t = tergum.

Genitalia about same length as tergum 8. Tergum 9 as a short plate dorsally, longer laterally with margins folded around bases of cerci almost meeting ventrally; shiny dark brown except for yellow tomentum along posterior border and 3–4 short dark bristles. Sternum 8 shiny dark brown, about ⅔ as long as wide, with lateral and posterior borders arched upward; posterior borders rounded at corners, mesally elevated, forming a distal arched process which extends posteriorly toward the genital aperture and cerci bases; arched process reddish brown. Bristles of sternum 8 numerous, usually yellow or yellow brown, as follows: 9–10 stout bristles in anterior ⅓ of sternum, 3–4 bristles near posterior corners, sometimes dark brown or black, numerous short yellow bristles at anterior corners and scattered around bases of stout bristles; numerous short seta-like bristles on posterior ⅓, abundant along midline, except for a few elongated ones located laterally on distal process, sometimes are above or around sides of distal process. Sternum 9 reduced, appearing as 2 horizontal slender sclerites, united mesally, located between lateral margins of tergum 9, dorsal to genital aperture and lying free in membrane. Cercus 1-segmented, about twice as long as wide, and covered with dense, short, yellow pile and primarily long yellow hairs along the margin. Subanal plate similar in shape and vestiture to cercus except smaller and less yellow hairs.

Types.—All specimens were collected among woody scrub vegetation (primarily Jumbay beans, *Leucaena leucocephala* (Lam.) de Wit, Leguminosae) near the CCFL Research Station (College Center of the Finger Lakes, Bahamian Campus) at the north end of the Island of San Salvador in the Bahamas. Most specimens were collected in a Malaise trap while a few were taken with hand nets. Holotype ♂, 7.VI.80, 0.8 km S CCFL. Allotype ♀, 28.V.80, same location. Paratypes (10 ♂, 4 ♀): ♂ 20.XI.1975 (Tracey L. St. John) CCFL; ♂ 4.XIII.1975 (Steve Young) CCFL; ♀ 27.XI.1978 (T. L. Slotzhaner) dump at Graham's Harbor 1.4 km S CCFL; ♂ 1.VI.1979 (A. G. Scarbrough) CCFL Res. Sta.; ♀ 5.XII.1979 (D. Dowling) Rd. to French Bay 0.9 km N CCFL; ♀ 5.XII.1979 (J. Irwin) trail to East Beach 3.5 km E CCFL; ♀ 5. ♂ 7.VI.1980 (A. G. Scarbrough) 0.8 km S CCFL; 6 ♂ 6.7.8.11.12.16.VI.1981 (A. G. Scarbrough and R. Rutkauskas) 0.8 km S CCFL.

The holotype and allotype are deposited in the National Museum of Natural History, Washington, D.C. and the paratypes at the American Museum of Natural History, New York, and the collection of one of the authors (AGS).

Etymology.—The specific epithet is in honor of Earl Hanebrink, Professor of Biology, Arkansas State University, a former advisor who introduced this interesting group of flies to one of the authors (AGS).

Discussion.—Variation among specimens in the type-series is very slight. Most notable differences are as follows: body lengths 11.9–12.8 mm ♂, 10.6–11.3 mm ♀; antennal rays from 10–11 to 14–15 ♂, from 11–12 to 14–15 ♀. Both sexes show some color differences of the legs and in vestiture. Specimens captured in May–June are usually lighter in the intensity of yellow than those captured at other times of the year. Also a few specimens have a narrow line or ring of white tomentum bordering the eyes in the face and the bases of the antennae. In "greased" specimens, the scales on the face retained some recognizable yellow color. Chaetotaxy: dorsal occipital bristles varied from all white to 5 black; second pair of ocellar bristles usually absent; strong dorsocentrals 1 to 4, usually 3; an occasional extra presutural or postalar bristle, always black, weak, unilateral; the dorsal presutural bristles, usually black, sometimes pale and unilateral. In males, the basal dorsoposterior bristles of the hindtibia are sometimes absent and the basal bristles in the ventroposterior row of the hindfemur vary from 1 to 2.

In addition to genitalia, females may be distinguished from males by the presence of 4 to 5 pale brown bristles in the upper half of the mystax, greater number of dark tibial bristles and yellowish tomentum which extends farther down on the pleuron, and the absence of enlarged hindlegs. Males also have a modified posteroventral row of bristles on the hindfemur and pale bristles on the hindtarsus.

Diagnosis.—The two prominent black bands on the forefemur in both sexes, the dark vertical lines in the marginal cell, the combined characters of the hindlegs, and genitalia of males are unique to the species and readily separate *O. hanebrinki* from other described species in the West Indies. The only *Ommatius* species (*O. abana* Curran) endemic to the Bahamas was described from three females collected on South Bimini Island (Curran, 1953). *Ommatius abana* is readily recognized from *O. hanebrinki* by two broad black bands on the hindfemur, a short stylus with only 4 rays near the tip, and appressed black hairs on terga 7–8.

Four Jamaican species (Farr, 1965) exist of which three are distantly related. In addition to the characters above, *O. alexanderi* Farr and *O. reophilus* Farr have two marginal scutellar bristles which are absent in *O. hanebrinki*. *Ommatius*

jamaicensis Farr has dark orange-brown legs, and the apical band of the foretibia extends along the anteroventral surface almost the full length of the segment; in *O. hanebrinki* the legs are lighter and the dark streak on the foretibia is absent. Furthermore, males of all three Jamaican species have slight to prominent bulges in the costal margins. In Curran's (1928) key to species from the Americas, *O. hanebrinki* does not run down well, but might be forced to *O. ruficauda* Curran. The latter differs from *O. hanebrinki* as follows: a slightly spatulate abdomen, all black occipital bristles, a single apical band on the forefemur, and a row of eight black bristles on the hindfemur.

In Wilcox's (1936) key, *O. hanebrinki* runs to *O. tibialis*. Specimens of *O. tibialis* differ from *hanebrinki* in that they have either the anterior surface of the forefemur wholly black or with a black apex and base which merge by a somewhat lighter dark streak. *Ommatius hanebrinki* is also easily separated from *O. tibialis* by its smaller size, fewer dark bristles in the mystax, lighter abdominal tomentum, and yellowish bristles of the mid- and hindfemora. Males of *O. hanebrinki* also lack a prominent costal bulge.

Acknowledgments

All studies on San Salvador Island were conducted through programs of the College Center of the Finger Lakes. Thanks are extended to Don Gerace, CCFL, for assisting us with living arrangements and transportation during our work, to Nancy Elliott, Department of Biology, Hartwick College, Oneonta, New York, for contributing specimens, to Eric Fisher, Department of Entomology, University of California, Riverside, California. Joseph Wilcox, Anaheim, California, and Lloyd Knutson, IIBIII, ARS, U.S. Dep. Agric., Beltsville, Maryland, for their interest in this work and for critically reviewing early drafts of the manuscript; and to the Faculty Research Committee of Towson State University for publication and reprint funds.

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